03/21/2002 06:31

HEWLETT-PACKARD COM Intellectual Property Admini P. O. Box 272400 Fort Collins, Colorado 80527-2400



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):

Lowell E. Kolb et al.

Confirmation No.: 2624

Application No.: 09/813,257

Examiner: Vu, Quynh Nhu H

Filing Date:

03/19/2001

6172440896

Group Art Unit: 2841

Title:

FILLER MATERIAL AND PRETREATMENT OF PRINTED CIRCUIT BOARD COMPONENTS

TO FACILITATE APPLICATION OF CONFORMAL EMI COATING

COMMISSIONER FOR PATENTS Washington, D.C. 20231

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

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| (1) FOR | (2) CLAIMS REMAINING AFTER AMENDMEN | (3) NUMBE | | | (5) PRESE |) NT | | (6) ATE | ADDI | (7) TION/ EES |
| TOTAL CLAIMS | 20 | MINUS | | 20 | = | 0 | X | \$18 | \$ | |
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| | | | TOTALA | DDITIONAL F | EE FOR | THIS | AMEN | DMENT | \$ | |

that may regulate fees. A duplicate copy of this sheet is enclosed. I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C.

Date of Deposit: 03/05/02

Typed Name: Michael G. Verga

Respectfully submitted,

Lowell E. Kolb et al.

Michael G. Verga, Esq.

Attorney/Agent for Applicant(s)

39,410 Reg. No.

Date: 03/05/02

Rev 10,01 (TransAmd)

20231.

Telephone No.: (617) 244-0490 Attach as First Page to Transmitted Papers

Received from < 6172440896 > at 3/21/02 5:31:53 AM [Eastern Standard Time]

6172440896

Michael G. Verga, Esq. 11 Royce Road Newton, Massachusetts 02459 617/244-0490 Fax 617/244-0896

FAX COVER SHEET

| Number of Pages (inclu | ding Cover Sheet): 15 |
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| | Examiner Patel |
| TO: | Examiner rates |
| COMPANY: | U.S. Patent and Trademark Office |
| FROM: | Michael G. Verga |
| PHONE NUMBER: | 703-305-2617 |
| FAX NUMBER: | 45.40 |
| Priority Mail | NTS WILL BE SENT: Overnight Air Mail XX_Not Sent |
| Priority Mail COMMENTS: | |
| Priority Mail COMMENTS: Examiner Patel: Per our conversation the on March 5, 2002. As number of claims and | Application 09/813,257 his past week, following is a copy of the Response that I believe was filed I noted, I may have filed an incorrect version that indicated the wrong presented amendments to claims that did not exist. If so, please replace the the following amendment. If the following amendment was indeed |
| Examiner Patel: Per our conversation the one filed on 3/5, then please | Application 09/813,257 his past week, following is a copy of the Response that I believe was filed I noted, I may have filed an incorrect version that indicated the wrong that I have filed an incorrect version that indicated the wrong I noted, I may have filed an incorrect version that indicated the wrong in the did not exist. If so, please replace |

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PAGE 04

ATTORNEY'S DOCKET NO: 10001844-1

DEFICE 1-16

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Lowell E. Kolb et al.

Serial No.:

09/813,257 03/19/2001

Filed: For:

FILLER MATERIAL AND PRETREATMENT OF PRINTED CIRCUIT

BOARD COMPONENTS TO FACILITATE APPLICATION

OF A CONFORMAL EMI SHIELD

Examiner:

Vu, Quynh Nhu H

Art Unit:

2841

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Parents, Washington, D.C.

20231, on the 6th day of MARCH, 2002.

Signature

Box Non-Fee Amendment Commissioner for Patents Washington, D.C. 20231

RESPONSE & AMENDMENT UNDER 37 CFR §1.115

Dear Sir:

In response to the Office Action mailed December 06, 2001 (PTO Prosecution Paper No. 5), Applicants submits the following Amendments and Remarks.

It is not believed that extension for time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to allow consideration of this paper, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefore, including fees for net addition of claims, are hereby authorized to be charged to Deposit Account No. 08/2025.

Application: 09/813,



Response to Action dated 12/06/01

<u>AMENDMENTS</u>

Please amend the above-identified application as follows:

In the Claims

Please cancel claim 2 without prejudice or disclaimer.

Please substitute the following claims 1, 3, 4, 5, 8, 11, 12, 14, 15 and 16 for claims of the same number previously pending.

1. (Amended) A printed circuit board comprising:

a printed wiring board;

a plurality of components mounted on said printed wiring board, wherein the printed circuit board has a cavity with one or more openings to the surface of the printed circuit board; and

an electrically non-conductive filler material disposed in the cavity and on the surface of the printed circuit board immediately surrounding the cavity so as to bridge across the one or more cavity openings and to at least partially infill the cavity, wherein the cavity is substantially inaccessible to subsequently-applied coatings.

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3. (Amended) The printed circuit board of claim 1, wherein the cavity comprises:
a volume of space defined by the leads of a component, the component body and
the printed wiring board, wherein the volume of space has a plurality of openings to the
surface of the printed circuit board between neighboring component leads.

- 4. (Amended) The printed circuit board of claim 1, wherein the cavity comprises: a volume of space between neighboring components mounted on the printed wiring board.
- 5. (Amended) The printed circuit board of claim 1, wherein the cavity comprises:

 a volume of space between a component mounted on the printed wiring board and the printed wiring board.